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To What Extent Are Canadians Exposed to Low-Income?

by René Morissette and Marie Drolet

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Abstract

In this paper, we investigate the extent to which Canadians were exposed to low-income during the 1993-1996 period. Our main findings are the following. First, while 1 in 10 Canadians live in families with low-income in a given year, as many as 1 in 5 are exposed to *at least one year* of low-income during a 4-year interval. Second, 1 in 20 Canadians are exposed to low-income for *4 consecutive years*. Third, 40% to 60% of individuals who fall into low-income in a given year will no longer have low-income the following year. Fourth, some spells of low-income last a long time: of all spells started in 1994, 30% lasted 3 years or more. Fifth, Canadians who are the most susceptible to low-income tend to be young; to have little education; to be students and to live as unattached individuals or in lone-parent families. As well, Canadians facing disabilities that entail work limitations, those who are members of visible minorities (when considering the exposure to 4 years of low-income) or who have immigrated in or after 1977 tend to experience low-income. Sixth, high probabilities of being exposed to low-income do not necessarily imply high income gaps, that is, the average income of those in low-income may be quite close to the low-income cut-off. As a result, a complete understanding of the extent to which Canadians are exposed to low-income requires an analysis of both the probabilities of being exposed and the income gaps while being exposed.

LOW-INCOME CUT-OFFS

Recently, there has been extensive and recurring media coverage of Statistics Canada's low-income cut-offs (LICOs) and their relationship to the measurement of poverty. At the heart of the debate is the use of the LICOs as poverty lines. Statistics Canada has clearly and consistently emphasized, since their publication began over 25 years ago, that the LICOs are quite different from measures of poverty. They reflect a consistent and well-defined methodology that identifies those who are substantially worse off than the average. In the absence of an accepted definition of poverty, these statistics have been used by many analysts who wanted to study the characteristics of the relatively worse off families in Canada. These measures have enabled Statistics Canada to report important trends such as the changing composition of this group over time.

For further information, please refer to "On Poverty and Low-Income" on Statistics Canada's web site (www.statcan.ca). The menu path is "Concepts, definitions and methods", then "Discussion papers or new surveys".

Keywords: low-income; lone-parent families; visible minority; immigrants.

I. Introduction

Over the past twenty years, Statistics Canada has published estimates of the percentage of families with low-income. For instance, data from the Survey of Consumer Finances shows that between 1993 and 1996, roughly 12% of all Canadians lived in families who had a low-income (after tax).[1]

These numbers are useful because they tell us how many people have low-income in a given year as well as the characteristics of these people (e.g. age, education level, occupation). Yet they provide an incomplete picture for the analysis of low-income. Specifically, they do not distinguish between individuals who have low-income "temporarily" from those who have low-income "permanently". For policy purposes, this distinction is crucial. The former may require short-term emergency assistance while the latter may need training programs to enhance their skills or to increase their annual wages and, as a result, move them out of low-income.

The distinction between individuals who receive low-income temporarily and those who have low-income for a long period of time requires measuring the duration of spells of low-income.

A different issue is the extent to which Canadians are *exposed* to low-income, i.e. whether, in a given time interval, they receive low-income for a high number of years. Until recently, it was impossible to address this issue in Canada. The Survey of Labour and Income Dynamics (SLID), which now covers the 1993-1996 period, fills this gap. It follows individuals over time and allows analysts to distinguish those who receive low-income for, say, one year only, from those who have low-income for several years.[2]

The goal of this paper is to present basic facts regarding the extent to which Canadians are exposed to low-income during a 4-year time interval. That is, we analyse the percentage of individuals who had low-income for 0,1, 2, 3 or 4 years during the 1993-1996 period.

The plan of the paper is as follows. First, we examine how different turnover rates among the low-income population affect the number of years in low-income (Section II). Second, we study which Canadians are likely to experience four consecutive years or at least one year of low-income during the 1993-1996 period (Section III). Third, since the major income earner plays a crucial role in determining a family's income, we consider the characteristics of the major income earners and their influence on the probability of being exposed to low-income (Section IV). Fourth, we analyse how far below the low-income cut-off (LICO) individuals are while experiencing low-income (Section V). Finally, we briefly examine entry rates into and exit rates out of low-income (Section VI). A summary and some concluding remarks follow.

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[1] Statistics Canada, *Low-income after tax, 1996*. Catalogue 13-592-XPB, Table 3, page 33.

[2] Duncan (1984, Chapter 2) analyzes the dynamics of low-income in the United States using the first ten years of data from the Panel Study of Income Dynamics.

II. Measurement Issues

II.1 Exposure vs duration

When analysts use cross-sectional data to study low-income, they are quickly confronted with two facts. First, the incidence of low-income does not vary much from one year to the next. Second, the profile of individuals with low-income also exhibits very little change. Taken together, these two facts suggest that most, if not all, individuals who receive low-income in a given year will do so on a permanent basis. As shown below, this suggestion is misleading.

Assume the incidence of low-income is 25% and consider a 4-year period. First, if there is ***no turnover*** among the individuals experiencing low-income, then the individuals experiencing low-income in 1996 will be exactly the same as those with low-income in 1993. The analyst will get the following result:

Case 1: No turnover within 4 years

Percentage of individuals with low-income 0,1,2,3,4 years during the 1993-1996 period

# of years	**0**	**1**	**2**	**3**	**4**	**Ever**
%	75%	0%	0%	0%	25%	25%

Second, if there is ***complete turnover*** within 1 year, a first group of (25%) individuals experiences low-income for only 1 year and are then replaced by a second group, and so on. After 4 years, all individuals will have received low-income for 1 year. The analyst will then get the following result:

Case 2: Complete turnover within 1 year

Percentage of individuals with low-income 0,1,2,3,4 years during the 1993-1996 period

# of years	**0**	**1**	**2**	**3**	**4**	**Ever**
%	0%	100%	0%	0%	0%	100%

Third, an intermediate scenario occurs when 25% of individuals encounter low-income for 2 years (1993 and 1994) and then are subsequently replaced by a second group who exhibits the same pattern (i.e. experiences low-income in 1995 and 1996). The analyst will then get the following result:

Case 3: Intermediate case: complete turnover within 2 years

Percentage of individuals with low-income 0,1,2,3,4 years during the 1993-1996 period

# of years	**0**	**1**	**2**	**3**	**4**	**Ever**
%	50%	0%	50%	0%	0%	50%

All three cases are consistent with the same incidence of low-income in a given year, i.e. 25%. Yet, for each case, the proportion of individuals ever-exposed to low-income differs. More precisely, the higher the rate of turnover, the greater the percentage of individuals who receive low-income for *at least* 1 year during the period considered. Put another way, the higher the rate of turnover, the lower the percentage of individuals who are never poor during the period.

One could think that the first set of numbers (Case 1), for which there is no turnover, is a good approximation of the dynamics of low-income. But as we shall see, some individuals receive low-income for several years while others receive low-income only temporarily.

The number of years in low-income measures neither the duration of spells of low-income nor the occurrence of multiple spells.[3] For example, an individual encountering low-income only in 1993 will be classified, according to this method, as receiving low-income for one year. However, this individual may have started a spell of low-income in 1984 and may have been in that state for ten years. The key point is that we simply measure the extent to which Canadians are *exposed* to low-income during a given period. That is, we measure the number of years of low-income *during a given time interval.*[4]

II.2 LICO after tax vs LICO before tax

Low-income cut-offs (LICOs) are established using data from Statistics Canada's Family Expenditure Survey. They are intended to convey the income level at which a family may be in straitened circumstances because it has to spend a greater proportion of its income on the basics (food, shelter and clothing) than the average family of similar size. The LICO varies by family size and by size of community.

Although LICOs are often referred to as poverty lines, they have no official status as such, and Statistics Canada does not recommend their use for this purpose.[5]

Separate low-income cut-offs (LICO's) can be calculated with before-tax income and after-tax income.[6] We use the after-tax rates because after-tax income is a better measure of disposable income than before-tax income.

We may now turn to examine the extent to which Canadians are exposed to low-income during a given time period.

III. Which Canadians are the most exposed to low-income in a 4-year period?

In this section, we consider two groups: 1) all individuals, 2) individuals aged 16 and over. We do so because the Survey of Labour and Income Dynamics (SLID) contains information on age, sex and family composition for all individuals but contains data on educational attainment, student status,

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[3] Logistic regression as applied to survival data can be used to model the duration of spells of low-income. See Hosmer and Lemeshow (1989). Multiple episodes of low-income are taken into account in Huff Stevens (1995).

[4] One should also note that, except for cases consisting of 1 year or 4 years, the number of years with low-income does not necessarily capture consecutive years. For instance, an individual who has received low-income for 2 years in the 1993-1996 period may have had 2 spells of low-income, one, say, in 1994 and the other in 1996.

[5] For a detailed explanation, see the article by I.P. Fellegi titled "On Poverty and Low-income". This article is available on Statistics Canada's internet site, under the label "Other concepts and definitions".

[6] After-tax income refers to income after taxes and government transfers.

visible minority status, immigration status and work limitation status only for individuals aged 16 and over.

III.1 All individuals [7]

III.1.1 Overview

Cross-sectional data from SLID shows that in 1993, 11% of all individuals had low-income after taxes and transfers. Had there been no turnover among the low-income population, the percentage of individuals who had received low-income for at least one year during the 1993-1996 period would have remained at 11% (Case 1). Conversely, with complete turnover within one year, about 44% of Canadians would experience low-income (i.e. Case 2). However, the Canadian experience with low-income lies between these two extreme cases.

Roughly 21% of Canadians lived in families with low-income for at least one year during the 1993-1996 period (Table 1). Thus, while 1 in 10 Canadians have low-income in a given year, as many as 1 in 5 were exposed to low-income for at least one year during the period.

Even though there are movements of individuals into and out of the low-income population, some individuals do live in straitened circumstances persistently. About 5% of Canadians lived in families experiencing low-income for 4 consecutive years during the 1993-1996 period. The fact that low-income is a continuous state for at least 1 in 20 Canadians indicates that while there is turnover among the low-income population, this turnover is far from being complete (within a 4-year period). At the same time, a majority of Canadians seem insulated from low-income: almost 80% of Canadians lived in families who never experienced low-income between 1993 and 1996.

Table 1 shows the percentage of Canadians exposed to 0,1,2,3, and 4 years of low-income for selected demographic groups.[8] There are several noteworthy observations.

First, there are no major differences in the degree to which men and women are exposed to low-income: roughly 20% (5%) encountered low-income for at least one year (4 consecutive years) between 1993 and 1996.

Second, Canadians aged 18 to 24 (33%) and pre-school aged children (26%) live in families with low-income for at least one year more frequently than elderly Canadians (13%).

Third, unattached individuals (19%) and Canadians living in lone-parent families (23%) are more exposed to four consecutive years of low-income than those living in families composed of couples with children (4%).[9]

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[7] In this section, our sample consists of all individuals present in the four year SLID panel. The sample consists of 31,484 observations.

[8] Appendix Table 1 shows the corresponding numbers using low-income cut-offs before taxes and transfers.

[9] In this paper, the term "couple" includes married couples and couples living in common-law relationships.

III.1.2 Multivariate analysis

It has been shown that age, family composition and to a lesser extent sex have an impact on the extent to which Canadians are exposed to low-income. This section addresses the following question: What factors influence the probability of experiencing low-income for four consecutive years or for at least one year?

In this section we employ a statistical technique that estimates the probability of experiencing low-income controlling for sex, age and family composition.[10] The results are presented in Table 2. The aforementioned relationships remain significant factors contributing to the exposure of low-income.

First, men and women are equally likely to live in families experiencing low-income persistently.[11] Their probability of having low-income for 4 consecutive years is 3% (Table 2). However, women have a slightly higher chance of being exposed to low-income for at least one year (19%) than men (17%).[12]

Second, substantial differences remain across age groups. As a consequence of the financial resources of their parents, children under 6 years of age are almost three times more likely to experience low-income for at least one year (29%) than elderly persons (10%).[13] [14] Furthermore, pre-school aged children are three times more likely to be exposed to low-income continuously (6%) than the elderly (2%). Taken together, these results suggest that exposure to low-income is more acute for young children than it is for elderly Canadians.

Third, the type of family in which an individual resides also matters. Unattached individuals and Canadians living in lone-parent families are almost seven times more likely to live with low-income continuously (22% and 20%, respectively) than the overall population (3%). As well, their probability of being ever exposed to low-income (43%) is double that of the overall population (18%). These differences reflect the fact that family units composed of only one earner have less

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[10] We run two separate logistic regressions: (1) for the probability of receiving low-income for four years, (2) for the probability of receiving low-income for at least one year. The dependent variable equals 1 if an individual lives in a family exposed to four consecutive years (at least one year) of low-income, 0 otherwise. The probabilities presented in Table 2 are conditioned on the average values of all *other* regressors. For instance, when looking at the effect of gender, the probability of receiving low-income persistently is calculated based on the average values of all explanatory variables other than gender (i.e. age and family composition).

[11] For the sake of brevity, in the remainder of the paper, we will use the terms "persistently" or "continuously" to refer to individuals who lived in families which received low-income for four consecutive years. We will also use the term "ever exposed to low-income" to refer to individuals who live in families which had low-income for at least one year.

[12] All differences in probabilities mentioned in the paper are statistically significant at the 5% level.

[13] In fact, the probability of being ever exposed to low-income (in a 4-year period) equals almost 25% for individuals aged 24 or less, compared to 18% for the overall population.

[14] The small percentage of seniors 65 and over who encounter low-income hides substantial differences between men and women in this age group. About 7% of women in this age group were in low-income on a continuous basis, compared with only 1% of their male counterparts. In part, this likely reflects the fact that many of these women did not participate in the labour market when they were under 65, and thus do not receive a pension income from previous jobs.

potential for escaping low-income than those composed of dual-earner couples. We discuss these differences in more detail below.

The main message conveyed by Tables 1 and 2 is the following: compared to other Canadians, pre-school aged children, unattached individuals and individuals living in lone-parent families are highly exposed to low-income.

An important point to note is that families at high risk of encountering low-income do not necessarily represent a big share of the low-income population. For instance, even though individuals living in a lone-parent family in 1993 had a high risk (32%) of being in low-income that year, they accounted for no more than 20% of the low-income population in 1993 (Appendix Table 2). In other words, 80% of individuals in low-income in 1993 did *not* come from lone-parent families.

To get a more complete picture of those Canadians highly exposed to low-income, we need to examine several other individual characteristics such as educational attainment, visible minority status, student status, immigration status and work limitation status. To do so, we must restrict our attention to individuals aged 16 and over. We may now turn to discuss the extent to which Canadians aged 16 and over are exposed to low-income.

III.2 Individuals aged 16 and over[15]

III.2.1 Overview

Table 3 shows the percentage of Canadians aged 16 and over who were exposed to 0,1,2,3 or 4 years of low-income during the 1993-1996 period. The numbers are presented for several socio-economic characteristics.

There are several striking differences across socio-economic characteristics. First, Canadians with less than a high school education are exposed to at least one year of low-income more often (24%) than university graduates (10%). The former group also experiences continuous low-income more frequently (8%) than the latter group (1%). Second, for both measures of exposure used, individuals who were students for all 4 years during the 1993-1996 period live under straitened circumstances more often than individuals who are not students. Third, compared to other Canadians, members of visible minorities fare worse: about 17% of Canadians who are members of visible minority groups experience low-income for 4 consecutive years, compared to 4% for other Canadians. Fourth, Canadians with work limitations are more likely to face low-income: about 17% are exposed to low-income for 4 years and 40% are in low-income at least one year.[16] Fifth, immigrants who came to Canada after 1976 appear to be more exposed to low-income than Canadian-born individuals: roughly 40% of them were exposed to at least one year of low-income, a much higher percentage than for the Canadian-born (19%).

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[15] In this section, our sample consists of all individuals aged 16 and over present in the four year SLID panel. The sample consists of 23,475 observations.

[16] A person has a work limitation if he/she suffers from a long-term physical condition, mental condition or health problem which limits the kind or amount of activity he/she can do at work or at a business.

Consistent with our earlier findings (Section III.1), young Canadians, unattached individuals and Canadians living in lone-parent families remain highly exposed to low-income.

Table 10 shows the distribution of Canadians aged 16 and over living with low-income for four consecutive years for various socio-economic characteristics. Two interesting findings emerge. First, persons with less than a high school education, with work limitations, who are members of a visible minority group or who immigrated after 1976 are disproportionately represented in the population of persons exposed to continuous low-income. For instance, about 1 in 4 Canadians aged 16 and over have less than a high school education but over 2 in 5 Canadians exposed to four continuous years of low-income have less than a high school education.[17] Second, nearly 2 in 3 Canadians exposed to continuous low-income live as unattached individuals throughout the 1993-1996 period and almost one third of these individuals are elderly (65+) women.

III.2.2 Multivariate analysis

It has been shown that a variety of socio-economic characteristics have an impact on the extent to which Canadians are exposed to low-income. While interesting, these findings provide only a partial view of the individual characteristics leading to a high degree of exposure to low-income. The reason is that they do not take into account the correlation between various factors. For instance, visible minorities could be highly exposed to low-income simply because many of them are immigrants. Similarly, the high exposure of young Canadians could be caused by the fact that many of them are students and have limited workhours.

This section addresses the following question: What factors influence the probability of experiencing low-income for four consecutive years or for at least one year? To assess the contribution of each factor, we employ a statistical technique that estimates the probability of experiencing low-income as a function of sex, age, education, student status, work limitation status, visible minority status, immigration status and family composition.[18] The results are presented in Table 4.

The multivariate analysis reveals that, after controlling for several factors, substantial differences in the exposure to four consecutive years of low-income remain across the following dimensions: educational attainment, student status, family type, work limitation status, visible minority status and immigration status.

Other things equal, Canadians who have not completed high school have a higher probability of being exposed continuously to low-income (5%) than university graduates (1%). The same is true for Canadians who attended school all four years (7%), compared to those who were not students

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[17] Persons with a work limitation, who are members of a visible minority group or who are recent immigrants represent 3.9%, 7.2% and 6.8% of the entire population aged 16 and over but they account for 13.4%, 24.6% and 21.7% of the population exposed to four consecutive years of low-income.

[18] We run two separate logistic regressions: (1) for the probability of receiving low-income for four years, (2) for the probability of receiving low-income for at least one year. The dependent variable equals 1 if an individual lives in a family exposed to four consecutive years (at least one year) of low-income, 0 otherwise. The probabilities presented in Tables 4 and 6 are conditioned on the average values of all *other* regressors. For instance, when looking at the effect of gender, the probability of receiving low-income persistently is calculated based on the average values of all explanatory variables other than gender. Note that this method underpredicts the exposure to low-income due to the non-linearity of the logit function.

(2%). Unattached individuals and people living in lone-parent families have a higher risk of persistent low-income (16% and 11%, respectively) than individuals living in families consisting of couples with children (2%).

Consistent with Table 3, Canadians who have a work limitation are much more likely to have low-income for 4 years (7%) than those without a work limitation (2%). Similarly, members of visible minorities have a harder time (8%) than other Canadians (2%). Immigrants who came to Canada after 1986 (between 1977 and 1986) fare worse (5% and 4%, respectively) than Canadian-born individuals (2%). Because the visible minority effect may vary depending on whether one is an immigrant or not (Hum and Simpson, 1998), one would ideally like to fully interact immigration status (Canadian-born, immigrated in 1987 or after, immigrated between 1977 and 1986, immigrated before 1977) with visible minority status. Small sample sizes preclude such an analysis.

Virtually all of these qualitative differences remain when we estimate the probability of being exposed to low-income for at least one year. The only exception relates to visible minority status. After controlling for other factors, members of visible minorities are not more likely than others to be exposed to at least one year of low-income. Also, some important differences reappear between age groups. Even after controlling for student status – among other things - young Canadians are three times more likely to have low-income for at least one year (22%) than the elderly (7%).

To sum up, Canadians most susceptible to low-income tend to be young, to have little education, to be students, and to live as unattached individuals or in lone-parent families. As well, Canadians who have work limitations, who are members of visible minorities (when considering the exposure to 4 years of low-income) or who have immigrated after 1976 experience low-income quite often.[19]

Because the major income earner plays a crucial role in determining family income, we may now turn to study the characteristics of the major income earner that affects the likelihood of experiencing low-income.

IV. Canadians highly exposed to low-income: what are the characteristics of the major income earner in their family?

IV.1 Overview[20]

In a purely accounting sense, whether or not an individual is exposed to low-income depends on the number of income earners in his/her family and the level of income each of these earners enjoy. The major income earner (MIE), i.e. the family member who receives the highest income, is likely to play a critical role. In this section, we investigate which characteristics of the major income earner affect the exposure of an individual to low-income.

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[19] The probability of having low-income for 4 years is very similar for men and women (i.e. roughly 2%). However, women are slightly more likely to receive low-income for at least one year (17%) than men (14%).

[20] In this section, our sample consists of all individuals whose major income earner remained the same during the four-year period. These individuals can be under 16 years of age as well as 16 and over. The sample consists of 22,165 observations.

With longitudinal data, a person's family composition can change over time. The concept of major income earner can be made operational in a straightforward way only for those individuals whose major income earner remained the same during the period.[21] These individuals represent 70% of the population. For the remaining 30%, the major income earner changed through time and thus, identifying the characteristics of *the* major income earner is impossible.[22] For this reason, the focus of this section is on the characteristics of the MIE for those individuals whose MIE remained the same during the period.[23] The results are shown in Table 5.

The story revealed by Table 5 is similar to that of Table 3. Individuals living in families where the major income earner has a work limitation are exposed the most often to persistent low-income: almost 30% experienced low-income for all four years during the period and roughly half had low-income for at least one year. These percentages exceed those observed for individuals living in families where the MIE has no work limitation (4% and 11%, respectively). Several factors may contribute to this difference. First, some Canadians with a work limitation may be completely unable to work. In this case, these individuals must rely mainly on government transfers as their major source of income. Second, having a work limitation may restrict the set of jobs an individual can perform and may limit their access to high-paying positions. Third, for the tasks that can be performed as efficiently as others, individuals with work limitations may receive lower wages due to discrimination. Fourth, some employers may discriminate through hiring rather than wages: they may simply prefer hiring individuals that do not have work limitations. Whatever the underlying mechanisms, having a work limitation dramatically increases the exposure to number of years of low-income.

Individuals whose MIE is a lone parent also suffer heavily from low-income: almost 25% were exposed to continuous low-income. In contrast, only 2% of individuals living in families composed of married couples with children experience low-income for four consecutive years. This difference likely reflects a combination of factors. First, in lone-parent families, only one parent can enter the labour market and contribute to family income. Second, institutional factors – such as the availability and cost of childcare services – combined with limited labour market opportunities may lead some lone-parents to decide not to participate in the labour market. Third, the set of jobs available to a lone-parent who participates in the labour market may be restricted by the need to combine family and work responsibilities. Lone parents may restrict their attention to jobs that are relatively close to school or to childcare facilities and may have to refuse high-paying jobs that may also involve long hours.

Unattached individuals are also at high risk of experiencing persistent low-income (19%) during the 1993-1996 period. At least two possible explanations can be put forward. Compared to other people, unattached individuals may be fairly young - at the beginning of their career - and may earn wages which are initially well below the LICO. Alternatively, many of them may be full-time university students and will encounter low-income during their school years even though they will

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[21] Not only was that person present in all four years, he/she had the highest income in all four years.

[22] One possibility is to use the characteristics of the major income earner for *each* year. However, this approach is cumbersome and does not lend itself to an easy interpretation.

[23] As Jenkins (1999) emphasizes, "if one restricts analysis to persons and households who do not experience compositional change, one will be omitting a significant fraction of the population and introducing a form of selection bias". We acknowledge this fact but perform the analysis for the subsample of individuals whose MIE has remained the same because it represents a substantial and meaningful segment of the population.

move out of low-income when they enter the labour market after graduation. In bivariate relationships, the data are consistent with these two interpretations. Roughly 14% of individuals living in family units where the major income earner (MIE) is under 25 experienced low-income for 4 years. Similarly, almost 25% of people living in family units where the MIE was a student (all years between 1993 and 1996) encountered low-income throughout the period.[24]

One of the best ways to avoid experiencing low-income is to live in a family in which the major income earner has a university degree. Between 1993 and 1996, 95% of these individuals did not experience low-income during the period. In contrast, when the MIE had not completed high school, individuals were less insulated from low-income: roughly 79% did not encounter low-income. Higher levels of education may affect the likelihood of having low-income in two ways. First, because highly educated individuals generally receive higher wages than their low-educated counterparts, they are less likely to have low-income at a given point in time. Second, as long as the wages of highly-educated individuals increase more rapidly over time than those of individuals with little education, the former group will likely move out of low-income more quickly than the latter.

Other groups also encounter low-income frequently. Individuals in families where the MIE is a member of a visible minority have low-income for four years more often (16%) than other individuals (5%). Similarly, individuals living in families where the MIE came to Canada after 1976 are exposed to at least one year of low-income more often than those living with a Canadian-born MIE.

People living in families headed by female lone-parents are in low-income more often than those in families headed by a male lone-parent. The same is true for individuals living in families composed of married couples with children and where the MIE is a woman, compared to those living in comparable families where the MIE is a man. However, one should note that female unattached individuals are not at higher risk of being in low-income than their male counterparts.

IV.2 Multivariate analysis

Most of the bivariate relationships shown in Table 5 remain in a multivariate analysis.[25] Table 6 shows that Canadians most susceptible to persistent low-income live with a major income earner who is young, who is a student (for at least 3 years during the period), who has little education or lives as unattached individuals or in a lone parent family. As well, Canadians living with a major income earner who faces a work limitation, or who is a member of a visible minority group are more vulnerable to continuous low-income.

Contrary to the findings of Section III.2, immigrants who came to Canada after 1986 now become *less* likely to be exposed to 4 years of low-income than Canadian-born. One possible explanation is that: 1) individuals whose major income earner has changed live more frequently in low-income than those whose MIE has remained the same, and 2) the former group is disproportionately found

[24] The terms "family" and "family units" include unattached individuals.

[25] The set of explanatory variables consist of the following variables: 1) age of MIE, 2) education level of MIE, 3) student status of MIE, 4) work limitation status of MIE, 5) visible minority status of MIE, 6) immigration status of MIE, 7) a full set of interaction terms between gender of MIE and family type.

among recent immigrants.[26] As a result, if we restrict our analysis to the latter group, we introduce a form of selection bias. Put simply, when doing so, we restrict our attention to families of recent immigrants who generally have more financial resources than the entire population of recent immigrants.

To check this conjecture, we selected individuals 16 and over whose MIE had not changed and ran a logistic regression for the probability of being exposed to four years of low-income. The coefficient for immigrants who came to Canada after 1986 was statistically insignificant. In contrast, this coefficient was significant for the sample of individuals aged 16 and over (Table 4). This evidence supports our conjecture.

Virtually all factors that increase the probability of continuous low-income also increase the likelihood of having low-income for at least one year (Table 6). The only exception is related to immigrants who came to Canada after 1986: they are more likely to have low-income for at least one year than Canadian-born.

To sum up, people who are highly exposed to low-income (Section III.2) have characteristics similar to those of the major income earners in families highly exposed to low-income. (This is not surprising since many individuals are themselves the major income earner in their family).

Individuals highly exposed to low-income tend to live in families where the major income earner is young, has little education, is a student, has a work limitation, is member of a visible minority or has immigrated to Canada after 1976. They also tend to live either as unattached individuals or in lone-parent families.

In Charts 1 to 4, we present the probabilities of being exposed to low-income for both measures (at least one year, 4 consecutive years) and for both samples (individuals aged 16 and over, individuals whose MIE has remained the same).

V. *Which Canadians have the highest income gap while experiencing low-income?*

For policy purposes, whether or not a family experiences low-income is not all that matters. The income gap, that is, the difference between the LICO and a family's income, also matters. Some individuals may be more likely than others to receive low-income during a given period of time. However, they may have *higher* family incomes than others while experiencing low-income states. In other words, a higher incidence of low-income is not necessarily associated with a greater depth of low-income or a greater income gap. In Table 7, we show the average income gap (i.e. the income gap averaged across all years during which an individual encountered low-income) for various demographic groups.[27]

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[26] Individuals whose MIE has changed have low-income for at least one year more often (35%) than individuals whose MIE has remained the same (15%). Among Canadian-born, the percentage of individuals whose MIE has changed is 30%, compared to 54% among individuals who immigrated in 1987 or after.

[27] Since the individual is the unit of analysis, we also average the individual-specific income gap across all individuals who lived in families who received low-income for at least one year.

The first two columns of Table 7 refer to individuals aged 16 and over who were exposed to at least one year of low-income. The first column includes individuals who had a negative family income (due to a negative net self-employment income of one of the family members) for at least one year as well as those who had positive family income throughout the years during which they encountered low-income. The second column excludes the former group. The third and fourth columns replicate the first two columns for the sample of individuals whose major income earner has remained the same.

Among individuals aged 16 and over, the average income gap varies between $5,107 and $5,745 (in 1996 constant dollars). For most of the four subsamples, the numbers suggest that individuals who have a high income gap are young, are highly-educated, are at school, are members of a visible minority, are immigrants and live in two-parent families with children. Surprisingly, university graduates have high-income gaps and people in lone-parent families generally have a lower income gap than those in families composed of married couples with children.

While the difference between the LICO and family income is a simple way to measure how far below the LICO a person lives, it is not appropriate for between-group comparisons. To see this, consider an unattached individual whose income is $1000 below his/her LICO and a family of six whose income is also $1000 below their LICO. The unattached individual is likely to be worse off than individuals in the family of six because his/her income gap represents a much higher *proportion* of his/her LICO, compared to individuals in the latter group. Thus, a better measure of the depth of low-income is to calculate the income gap in relative terms, i.e. as a percentage of a family's LICO:

GAP% = (Lico – Family income after tax) / Lico

To analyse how the depth of low-income varies for different individuals, we regress the average individual-specific GAP% on the same set of regressors as used in Section III.2. Four separate regressions are performed, one for each of the four subsamples defined above. The regression results are presented in Table 8.

For all four samples, we find that:

1) individuals aged 65 and over have an average income gap which is at least 16 percentage points smaller than that of individuals aged 25-34;
2) university graduates have an average income gap which exceeds by at least 6 percentage points that of individuals with some post-secondary education;
3) individuals living in married couple families with no children are farther below the LICO (by at least 5 percentage points) than individuals living in families consisting of married couples with children.
4) the income gap of immigrants who came to Canada after 1976 is not significantly different from that of Canadian-born individuals;

For three samples out of four, we find that:

1) the income gap is not higher for individuals with a work limitation;
2) the income gap is no longer higher for members of visible minorities;
3) the income gap is no longer smaller for individuals living in lone-parent families, compared to individuals living in two-parent families with children.

Individuals who are students for all four years have a higher income gap than non-students in only two subsamples: the effect of student status is therefore ambiguous.

The fact that highly-educated Canadians have a higher income gap than low-educated ones is surprising. University graduates are rarely exposed to low-income (Tables 3 and 5) but appear to be well below the LICO when they have a low-income. Why is this so? One possibility is that the rare cases where university graduates are exposed to low-income may occur following a layoff from a high paying job. If this job pays higher wages than alternative jobs—due to a rent associated with an industry effect – highly educated workers may initially search for a job with the same wage in the same industry. Unsuccessful periods of search may lead them to gradually lower their reservation wage. The result may be a long unemployment spell (within one or two years) which lowers the family's income substantially. This however, is pure speculation.

On the other hand, the fact that young Canadians have a higher income gap than the elderly implies that considering only the probabilities of being exposed to low-income may understate the extent to which some groups are disadvantaged.

In any event, the main lesson from Tables 7 and 8 is that high probabilities of being exposed to low-income do not imply high income gaps. As a result, a complete understanding of the extent to which Canadians are exposed to low-income requires an analysis of both the probabilities of being exposed and the income gaps while being exposed.

VI. Entry Rates and Exit Rates

In Section III, we showed that 21% of Canadians have had low-income for at least one year during the 1993-1996 period. Combined with the fact that only 11% of the population had low-income in 1993, this finding suggests that the low-income population is not static, i.e. undergoes substantial turnover. A more direct way to examine turnover among the low-income population is to calculate how many individuals move into and out of low-income every year.

Many factors lead to a change in low-income status. Being laid-off from a well-paid job, having a new child, moving from a small to a large community and getting divorced are all factors which may lead a family to move into low-income. Similarly, individuals who escape low-income may have done so by getting a highly paid job, getting married, moving from a small to a large company, having a child leave home or enter the labour market.

Of all individuals who started a spell of low-income in 1994, 57 % moved out of the low-income state in 1995 (Table 5). Similarly, of all individuals who started a spell of low-income in 1995, 43% escaped low-income in 1996. Thus, 40% to 60% of individuals who start receiving low-income in a given year will no longer have low-income the following year. These high exit rates clearly confirm that there is substantial turnover among the low-income population.

On the other hand, some spells of low-income last a long time: of all Canadians falling into low-income in 1994, 30% had low-income for 3 years or more.[28] This indicates that there is substantial persistence of low-income in Canada.

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[28] One may think that this number (i.e. 30%) is not consistent with the fact that 5% of the Canadian population has had four consecutive years of low-income between 1993 and 1996. This is not the case. The numbers simply

While the one-year exit rates are high, entry rates are fairly small: only a small fraction of the population at risk of starting a spell of low-income does so. For instance, only 5% (4%) of individuals at risk of entering low-income in 1994 (1995, 1996) did so. Taken together, the entry rates and exit rates convey the following message: relatively few individuals become members of the low-income population but as many as 60% of those who do will receive low-income for only one year.

VII. Summary and Concluding Remarks

Prior to the emergence of longitudinal data, some analysts may have viewed the low-income population as being static, exhibiting little, if no, turnover. This view is misleading. Roughly half of individuals who start a spell of low-income will be in that state for only one year. This refutes the notion that the low-income population is purely static. On the other hand, as many as 30% of individuals who start a spell of low-income will be receiving low-income for three years or more. This shows that low-income exhibits a non-negligible degree of persistence.

In a given year, 1 in 10 Canadians live in families who have a low-income. However, as many as 1 in 5 Canadians experience low-income for one year or more during a 4-year period. Experiencing low-income is an event affecting the lives of many Canadians. At the same time, 1 in 20 Canadians receive low-income continuously, i.e. for 4 consecutive years. In some families - such as those headed by female lone parents or those whose major income earner has a work limitation - 25% of individuals are exposed to 4 consecutive years of low-income. In some other cases - such as those involving families whose major income earner has a university diploma - individuals appear to be insulated from low-income.

These results confirm the idea that families headed by lone-parents have a hard time in Canada in the 1990s. If experiencing low-income as a child increases one's probability of encountering low-income as an adult, these results raise some concern about child poverty in these families.

These results also show that for many individuals with a work limitation, government transfers and earnings from (potentially) secondary earners are not big enough to lift them out of low-income. Having a limitation at work is likely to severely limit the earnings one can get from a job and is also likely to be a major barrier preventing individuals from reaching the middle-income class.

The fact that members of visible minorities and post-1976 immigrants are more likely than others to experience persistent low-income also deserves some attention. Hum and Simpson (1998) find that the wage disadvantage observed for visible minorities in the aggregate applies more to visible minorities who are foreign-born than to those who are Canadian-born.[29] From a methodological point of view, this suggests that, without a detailed analysis, one can hardly conclude that all visible

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refer to different populations. The second number (5%) refers to the *entire* Canadian population while the first number (30%) is a percentage of *Canadians falling into low-income in 1994*. Canadians falling into low-income in 1994 account for only 4% of the Canadian population (Table 9). By construction, none of the individuals who were in low-income for four consecutive years started a spell of low-income in 1994.

[29] More precisely, the authors find that among Canadian-born men, only black men have a wage disadvantage compared to individuals who are not members of a visible minority. Among foreign-born men, four visible minority groups (Black, Indo-Pakistani, Chinese and Non-Chinese Orientals) out of six face a wage disadvantage.

minority groups face the same wage disadvantage, compared to other individuals. The same conclusion may apply to low-income : some visible minority groups may have a greater risk of being in low-income than others. We have not investigated this issue.

One important finding is that families who have a high risk of being exposed to low-income do not necessarily have a large income gap while receiving a low-income. For instance, university graduates are farther away from the LICO than other individuals. Finding the explanations for such patterns requires further investigation.

Table 1: Percentage of individuals by number of years in low income, 1993-1996

Characteristics	Number of years in low income					At least one year in low income
	0	1	2	3	4	
Overall	79.4	7.5	4.6	3.3	5.2	20.6
Men	81.0	7.0	4.4	2.9	4.7	19.0
Women	77.9	8.0	4.7	3.7	5.7	22.1
Age						
Less than 6 years old	73.6	8.4	5.4	4.8	7.8	26.4
6 - 17 years	76.6	8.5	5.6	3.9	5.4	23.4
18 - 24 years	67.5	13.2	7.9	4.7	6.8	32.5
25 - 34 years	79.8	7.5	4.7	3.3	4.9	20.2
35 - 44 years	83.5	6.0	3.6	2.9	4.0	16.5
45 - 54 years	83.5	5.2	3.9	2.8	4.7	16.5
55 - 64 years	80.5	7.8	3.1	3.3	5.3	19.5
65 +	87.1	4.9	2.4	1.2	4.5	12.9
Family Composition						
Unattached individual	64.2	6.8	6.1	4.2	18.7	35.8
Married/Common-law - no children	93.3	3.7	1.8	-	-	6.7
Married/Common-law - with children	86.9	4.3	2.9	2.2	3.7	13.1
Lone parent	52.4	7.2	7.6	10.4	22.7	47.6
Other	87.7	4.4	1.3	3.0	3.5	12.3
Change in family composition	70.3	13.2	7.4	4.7	4.4	29.7
Sample size	25,582	2,405	1,411	950	1,136	5,902

Source: Survey of Labour and Income Dynamics, 1993-1996.
Note: - number too small to report

Table 2: Probability of individuals being exposed to low-income

Characteristics	Exposure to low-income: At some point during period	Exposure to low-income: For 4 consecutive years
Overall	17.9	3.4
Men	16.7	3.3
Women	19.1	3.6
Age		
Less than 6 years old	29.0	6.5
6 - 17 years	22.9	3.9
18 - 24 years	23.8	5.1
25 - 34 years	18.1	3.5
35 - 44 years	15.3	2.6
45 - 54 years	13.8	3.3
55 - 64 years	17.8	3.2
65 +	9.5	1.9
Family Composition		
Unattached individual	43.1	22.3
Married/Common-law - no children	8.5	0.5
Married/Common-law - with children	11.3	3.2
Lone parent	42.9	20.4
Other	13.1	3.6
Change in family composition	28.2	4.0
Sample size	31,484	31,484

Source: Survey of Labour and Income Dynamics, 1993-1996.

Note: Logit models were used to estimate the probability of being exposed to low-income (1) at some point during the period and (2) for four consecutive years.
The regressors include an intercept, age and family composition. The probabilities are calculated using the mean values of the explanatory variables.
Logit results available upon request.

Table 3: Percentage of individuals aged 16 and over by number of years in low-income, 1993-1996

Characteristics	Number of years in low-income					At least one year in low-income
	0	1	2	3	4	
Overall	80.2	7.4	4.4	3.1	4.9	19.8
Men	82.5	6.7	4.1	2.8	4.0	17.5
Women	78.0	8.0	4.8	3.5	5.7	22.0
Age						
16 - 24 years	67.4	12.9	8.3	4.9	6.4	32.6
25 - 34 years	79.8	7.5	4.7	3.3	4.9	20.2
35 - 44 years	83.5	6.0	3.6	2.9	4.0	16.5
45 - 54 years	83.5	5.2	3.9	2.8	4.7	16.5
55 - 64 years	80.5	7.8	3.1	3.3	5.3	19.5
65 +	87.1	4.9	2.4	1.2	4.5	12.9
Education						
Less than high school	75.9	6.6	4.9	4.2	8.4	24.1
High school graduate	82.6	6.5	4.2	1.8	4.9	17.4
Some or completed post secondary	81.2	8.1	4.2	3.0	3.5	18.8
University	89.9	4.4	2.6	1.7	1.4	10.1
Education level changed	69.0	12.3	8.1	5.1	5.6	31.0
Student status						
Not a student	82.9	6.4	3.7	2.5	4.5	17.1
Student for 1 year	76.9	9.8	4.6	4.0	4.7	23.1
Student for 2 years	68.9	12.2	7.8	6.6	4.5	31.1
Student for 3 years	69.9	9.8	8.0	5.4	7.0	30.1
Student for 4 years	66.5	10.4	8.2	4.3	10.6	33.5
Work limitation status						
No work limitations	82.2	7.0	4.3	2.8	3.8	17.8
Has a work limitation	59.7	10.2	5.4	8.0	16.7	40.3
Status changed during period	71.2	9.0	5.5	5.7	8.7	28.8
Visible minority status						
Visible minority	69.1	4.8	5.2	4.3	16.7	30.9
Not a visible minority	81.1	7.6	4.3	3.0	3.9	18.9
Immigration status						
Canadian born	80.9	7.7	4.3	3.0	4.2	19.1
Immigrant: before 1977	85.8	5.5	2.7	2.8	3.2	14.2
Immigrant: 1977-1986	61.3	-	12.9	-	14.7	38.7
Immigrant: 1987 and after	56.6	6.8	6.2	9.2	21.1	43.4
Family Composition						
Unattached individual	64.2	6.8	6.1	4.2	18.7	35.8
Married/Common-law - no children	93.3	3.7	1.7	-	-	6.7
Married/Common-law - with children	87.5	4.0	2.8	2.1	3.6	12.5
Lone parent	52.9	7.7	8.9	12.2	18.2	47.1
Other	89.4	4.9	-	-	2.7	10.6
Change in family composition	72.5	12.2	6.9	4.4	4.1	27.5
Sample size	19,309	1,760	986	644	776	4,166

Source: Survey of Labour and Income Dynamics, 1993-1996.
Note: - number too small to report

Table 4: Probability of individuals 16 and over being exposed to low-income

Characteristics	Exposure to low-income: At some point during the period	Exposure to low-income: For 4 consecutive years
Overall	15.6	1.9
Men : reference group	14.1	1.7
Women	17.1	2.2
Age		
16 - 24 years	22.0	2.5*
25 - 34 years : reference group	17.4	2.6
35 - 44 years	15.5	1.8
45 - 54 years	14.1	2.1*
55 - 64 years	16.0	1.9
65 +	7.0	0.9
Education		
Less than high school	24.8	5.1
High school graduate	16.3	2.8
Some or completed post sec. : ref. group	14.1	1.5
University	7.5	0.5
Education level changed	14.2*	1.0
Student status		
Not a student : reference group	14.5	1.7
Student for 1 year	18.0	2.3
Student for 2 years	23.0	2.3
Student for 3 years	22.0	4.3
Student for 4 years	26.2	6.6
Work limitation status		
No work limitations : reference group	13.2	1.6
Has work limitation	33.4	7.0
Status changed during period	23.3	3.6
Visible minority		
Visible minority	16.2*	8.2
Not a visible minority : reference group	15.6	1.7
Immigration status		
Canadian born : reference group	15.0	2.0
Immigrant: before 1977	12.9	1.1
Immigrant: 1977-1986	37.0	3.7
Immigrant: 1987 and after	37.5	4.9
Family Composition		
Unattached individual	38.4	16.4
Married/Common-law - no children	7.0	0.3
Married/Common-law - with children : ref. group	11.1	2.4
Lone parent	39.2	11.2
Other	7.7	0.9
Change in family composition	23.3	2.2*
Sample size	23,475	23,475

Source: Survey of Labour and Income Dynamics, 1993-1996.

Note: Logit models were used to estimate the probability of being exposed to low-income (1) at some point during the period and (2) for four consecutive years. The probabilities are calculated conditional on the average values of the explanatory variables.

* : coefficient of the variable is not significantly different from the coefficient of the reference group at the 5% level.

Table 5: Percentage of individuals in low-income for a given number of years, by characteristics of the major income earner, 1993-1996

Characteristics	Number of years in low-income					At least one year in low-income
	0	1	2	3	4	
Overall	85.5	4.1	3.0	2.3	5.2	14.5
Men	91.3	3.1	1.9	1.4	2.2	8.7
Women	69.9	6.6	5.8	4.5	13.2	30.1
Age						
16 - 24 years	64.9	7.0	7.2	7.2	13.7	35.1
25 - 34 years	82.3	5.4	4.0	2.6	5.7	17.7
35 - 44 years	88.1	3.2	2.3	2.1	4.3	11.9
45 - 54 years	90.1	2.4	2.4	1.5	3.6	9.9
55 - 64 years	83.0	6.0	2.2	2.3	6.5	17.0
65 +	87.3	3.6	2.6	1.2	5.3	12.7
Education						
Less than high school	79.4	4.0	3.6	3.2	9.8	20.6
High school graduate	86.5	3.1	2.2	1.6	6.6	13.5
Some or completed post secondary	86.2	4.7	3.3	2.2	3.6	13.8
University	95.0	1.8	1.7	-	-	5.0
Education level changed	72.3	8.6	3.8	6.9	8.4	27.7
Student status						
Not a student	88.0	3.5	2.3	1.5	4.7	12.0
Student for 1 year	82.4	5.2	3.7	4.7	4.0	17.6
Student for 2 years	77.3	7.0	6.0	4.5	5.1	22.7
Student for 3 years	68.6	-	11.8	-	12.1	31.4
Student for 4 years	64.0	-	-	-	23.0	36.0
Work limitation status						
No work limitations	88.7	3.4	2.8	1.6	3.5	11.3
Has a work limitation	51.2	7.3	3.2	9.2	29.1	48.8
Status changed during period	79.3	5.8	3.6	3.8	7.5	20.7
Visible minority status						
Visible minority	73.1	2.9	5.0	3.5	15.5	26.9
Not a visible minority	86.2	4.2	2.9	2.2	4.6	13.8
Immigration status						
Canadian born	86.3	4.0	2.5	2.2	5.1	13.7
Immigrant: before 1977	88.6	3.7	2.9	1.9	2.9	11.4
Immigrant: 1977-1986	59.9	-	11.9	-	20.4	40.1
Immigrant: 1987 and after	69.1	-	-	13.1	-	30.9
Family Composition						
Unattached individual	64.2	6.8	6.1	4.2	18.7	35.8
Married/Common-law - no children	95.6	2.4	1.3	-	-	4.4
Married/Common-law - with children	92.5	3.0	1.4	1.1	2.0	7.5
Lone parent	53.9	6.1	7.8	8.7	23.5	46.1
Other	88.2	2.9	-	4.2	3.4	11.8
Change in family composition	81.8	5.7	4.7	2.8	5.0	18.2
Sample size	19,332	919	601	450	863	2,833

Source: Survey of Labour and Income Dynamics, 1993-1996.

Note: - number too small to report

Table 5: Percentage of individuals in low-income for a given number of years, by characteristics of the major income earner, 1993-1996

Characteristics	Number of years in low-income					At least one year in low-income
	0	1	2	3	4	
Overall	85.5	4.1	3.0	2.3	5.2	14.5
Family composition and gender of major income earner						
Men						
Unattached individual	61.3	6.1	7.2	4.7	20.6	36.7
Married/Common-law - no children	95.9	2.0	1.3	-	0.5	4.1
Married/Common-law - with children	95.0	2.3	0.9	1.1	0.7	5.0
Lone parent	73.5	-	-	-	14.7	26.5
Other	94.1	-	-	-	1.5	6.0
Change in family composition	87.0	5.5	3.5	1.6	2.5	13.0
Women						
Unattached individual	65.8	7.1	5.5	3.9	17.7	34.2
Married/Common-law - no children	93.4	-	-	-	0.3	6.7
Married/Common-law - with children	77.6	7.4	4.5	-	9.4	22.4
Lone parent	50.9	6.7	9.0	27.6	24.9	49.1
Other	78.4	6.4	-	7.4	6.7	21.6
Change in family composition	68.5	6.4	7.9	5.7	11.5	31.5
Sample size	19,332	919	601	450	863	2,833

Source: Survey of Labour and Income Dynamics, 1993-1996.
Note: - number too small to report

Table 6: Probability of being exposed to low-income by characteristics of the major income earner

Characteristics	Exposure to low-income: At some point during period	Exposure to low-income: For 4 consecutive years
Overall	8.5	1.2
Age		
16 - 24 years	22.3	4.7
25 - 34 years	12.8	1.9
35 - 44 years : reference group	8.2	1.2
45 - 54 years	6.5	1.1*
55 - 64 years	9.8	1.3*
65 +	3.6	0.2
Education		
Less than high school	16.5	3.5
High school graduate	9.2*	2.1
Some or completed post sec. : ref. group	8.3	0.9
University	3.0	0.3
Education level changed	11.0	1.2
Student status		
Not a student : reference group	8.4	1.2
Student for 1 year	11.3	1.2*
Student for 2 years	11.4	0.9*
Student for 3 years	20.9	4.3
Student for 4 years	23.7	8.9
Work limitation status		
No work limitations : reference group	6.3	0.7
Has work limitation	29.9	5.9
Status changed during period	13.8	2.0
Visible minority		
Visible minority	12.0	6.8
Not a visible minority : reference group	8.3	1.0
Immigration status		
Canadian born : reference group	8.2	1.3
Immigrant: before 1977	6.8	0.4
Immigrant: 1977-1986	34.7	3.5
Immigrant: 1987 and after	17.2	0.4
Sample size	22,165	22,165

Source: Survey of Labour and Income Dynamics, 1993-1996.

Note: Logit models were used to estimate the probability of being exposed to low-income (1) at some point during the period and (2) for four consecutive years. The probabilities are calculated conditional on the average values of the explanatory variables.

* : coefficient of the variable is not significantly different from the coefficient of the reference group at the 5% level.

Table 6: Probability of being exposed to low-income by characteristics of the major income earner

Characteristics	Exposure to low-income: At some point during period	Exposure to low-income: For 4 consecutive years
Overall	8.5	1.2
Family composition and gender		
Men		
Unattached individual : reference group	31.3	10.5
Married/Common-law - no children	3.5	0.3
Married/Common-law - with children	4.3	0.4
Lone parent	23.1*	8.7
Other	3.3	0.5
Change in family composition	9.4	1.1
Women		
Unattached individual	33.1*	13
Married/Common-law - no children	5.5	0.2
Married/Common-law - with children	19.7	6.1
Lone parent	39.4	14.9
Other	14.2	2.5
Change in family composition	24.3	5.8
Sample size	22,165	22,165

Source: Survey of Labour and Income Dynamics, 1993-1996.
Note: Logit models were used to estimate the probability of being exposed to low-income (1) at some point during the period and (2) for four consecutive years. The probabilities are calculated conditional on the average values of the explanatory variables.

* : coefficient of the variable is not significantly different from the coefficient of the reference group at the 5% level.

Table 7: Average income gap while receiving low-income, 1993-1996, 1996 constant $

	Average income gap = LICO - after tax family income			
	Individuals 16 and over		No change in major income earner	
Characteristics	All	Excludes negative family income	All	Excludes negative family income
All	5,745	5,107	5,106	4,696
Men	6,161	5,454	5,366	4,633
Women	5,430	4,848	4,906	4,743
Adult aged 25 - 34	6,412	5,553	5,879	5,442
Elderly (65+)	1,935	1,696	1,549	1,440
High school graduates	5,656	5,086	5,107	5,036
University graduates	8,274	6,249	7,664	6,273
Not a student	5,484	4,785	4,924	4,396
Student all 4 years	7,595	6,915	5,326	5,326
Canadian born	5,420	4,816	4,925	4,439
Immigrant: before 1977	6,919	5,584	4,884	4,736
Immigrant: 1977-1986	6,546	6,122	7,172	6,873
Immigrant: 1987 and after	8,174	7,757	6,153	6,153
Visible minority	8,262	7,600	6,620	6,620
Not a visible minority	5,444	4,804	4,932	4,462
Has a work limitation	6,325	4,625	4,826	4,826
No work limitation	5,188	5,585	5,986	5,242
Unattached individuals	3,713	3,624	3,713	3,624
Married/Com.-law with children	7,791	6,651	5,934	4,608
Lone parents	5,302	5,302	4,955	4,955
Sample size:	4,166	4,028	2,833	2,786

Source: Survey of Labour and Income Dynamics, 1993-1996

Table 8: OLS regression results: Dependent variable: ratio of depth of low-income to LICO, 1996 constant dollars

	Parameter estimates			
	Individuals 16 and over		No change in major income earner ***	
Characteristics	All	Excludes negative family income	All	Excludes negative family income
Intercept	0.2966 *	0.2533 *	0.2245 *	0.1894 *
Female	-0.0215 **	-0.0185 *	-0.0061	0.0150 **
Age: 16-24	0.0411 *	0.0364 *	0.0293	0.0321 **
Age: 35-44	0.0365 **	0.0206 **	0.0250	0.0135
Age: 45-54	0.1058 *	0.0443 *	0.1249 *	0.0403 *
Age: 55-64	0.0380 **	0.0127	0.0211	0.0054
Age: 65+	-0.1554 *	-0.1914 *	-0.1810 *	-0.2051 *
Education: level changed	0.0019	0.0052	0.0320	0.0309 **
Education: less than high school	-0.0262 **	-0.0092	-0.0261 **	-0.0100
Education: high school graduate	-0.0333 **	-0.0277 **	-0.0277	-0.0071
Education: university	0.1036 *	0.0648 *	0.0905 *	0.0869 *
Student: 1 year	-0.0190	-0.0070	-0.0186	-0.0105
Student: 2 years	-0.0011	0.0085	0.0021	0.0343 **
Student: 3 years	0.0311	0.0429 *	-0.0518	-0.0068
Student: 4 years	0.0818 *	0.0842 *	-0.0025	0.0288
Immigrant: before 1977	0.0510 *	0.0213	0.0145	0.0278 **
Immigrant: 1977-1986	-0.0271	-0.0312	0.0401	0.0259
Immigrant: after 1986	0.0110	0.0037	-0.0127	-0.0084
Visible minority	0.0197	0.0324 **	0.0059	0.0276
Work Limitation: yes	-0.0067	0.0054	-0.0047	0.0447 *
Work Limitation: changed	0.0327	0.0196	-0.0107	0.0286 *
Work Limitation: unknown	0.0050	0.0230 *	-0.0079	0.0134
Family: unattached individual	0.0238	0.0736 *	0.1114 *	0.1102 *
Family: married/com-law no children	0.0700 *	0.0530 *	0.1201 *	0.0775 *
Family: lone parent	-0.0480 **	-0.0060	0.0212	0.0121
Family: other	-0.0372	-0.0279	-0.0158	-0.0397 **
Family: composition changed	0.0322 **	0.0491 *	0.0918 *	0.0644 *
Sample size:	4,166	4,086	2,833	2,786

Source: Survey of Labour and Income Dynamics, 1993-1996

Notes: *significant at the 1% level ** significant at the 5% level

Notes: *** pertains to characteristics of the major income earner

Table 9: Exit from and entry into low income, 1993-1996

	Percent
Exit from low income	
Individuals falling into low income in 1994:	4.2
Percent remaining in low income in 1995	43.0
Percent remaining in low income in 1995 and 1996	30.0
Individuals falling into low income in 1995	3.8
Percent remaining in low income in 1996	57.3
Entry into low income	
Individuals at risk of falling into low income in 1994	89.0
Percent with low income in 1994	4.8
Individuals at risk of falling into low income in 1995	87.8
Percent with low income in 1995	4.3
Individuals at risk of falling into low income in 1996	88.0
Percent with low income in 1996	4.0

Source: Survey of Labour and Income Dynamics, 1993-1996

Table 10: Individuals aged 16 and over

Individual characteristics	Population with 4 consecutive years of low-income			Population 16 and over
Men	40.3			48.6
Women	59.7			51.4
Age				
16-24	20.9			16.0
25-34	23.1			23.2
35-44	17.4			21.5
45-54	14.7			15.4
55-64	12.1			11.2
65+	11.8			12.9
Education				
Less than high school	43.9			25.6
High School graduate	13.3			13.3
Some or completed post secondary	29.6			40.9
University	3.5			12.5
Unknown	2.1			1.0
Education level changed	7.7			6.7
Student status				
Not a student	69.9			75.8
Student for 1 year	9.2			9.6
Student for 2 year	5.9			6.3
Student for 3 year	5.7			4.0
Student for 4 year	9.4			4.4
Work limitations				
No work limitations	50.3			65.1
Work limited	13.4			3.9
Status changed during period	10.7			6.0
Unknown	25.7			25.0
Visible minority status				
Visible minority	24.6			7.2
Not a visible minority	74.4			92.3
Immigration status				
Canadian born	69.9			80.9
Immigrant before 1977	8.4			12.3
Immigrant 1977-1986	19.6			5.1
Immigrant 1987 or after	2.1			1.7
Family Composition, 1993-1996				
Unattached individuals	64.5		100.0**	9.0
..... Elderly (65+) women		18.5	28.7	
..... Women aged 16-64		20.9	32.4	
.....Men all ages		25.1	38.9	
Married/Common-law - no kids	1.5			16.8
Married/Common-law - with kids	19.7			26.8
Lone Parent*	8.8			2.4
Other	4.5			8.2
Change in family composition	31.0			36.9
Sample size	776			23,475

Source: Survey of Labour and Income Dynamics, 1993-1996

Note: *The interpretation of this variable is as follows:

2.4% of individuals aged 16 and over lived in lone parent families for all 4 years, 1993-1996.

8.8% of individuals exposed to 4 consecutive years of low-income lived in lone parent families throughout the 1993-1996 period.

Note: ** refers to the distribution of unattached individuals, 1993-1996, with 4 consecutive years of low-income

Appendix Table 1: Percentage of individuals by number of years in low-income, 1993-1996

Characteristics	Number of years in low-income					At least one year in low-income
	0	1	2	3	4	
Overall	74.2	8.6	5.2	4.0	8.1	25.9
Men	76.5	8.1	5.1	3.6	6.7	23.5
Women	71.9	9.0	5.3	4.5	9.4	28.2
Age						
Less than 6 years old	69.9	7.6	6.4	4.7	11.5	30.2
6 - 17 years	71.6	10.1	5.8	4.3	8.3	28.5
18 - 24 years	61.9	15.2	8.3	6.2	8.4	38.1
25 - 34 years	75.5	8.7	4.9	3.8	7.1	24.5
35 - 44 years	80.3	6.9	3.9	3.2	5.8	19.8
45 - 54 years	80.4	6.1	3.6	3.4	6.6	19.7
55 - 64 years	74.2	8.7	5.1	4.0	7.9	25.7
65 +	73.6	6.0	4.8	3.5	12.0	26.3
Family Composition						
Unattached individual	53.2	6.2	5.8	6.1	28.8	46.9
Married/Common-law - no children	87.4	5.8	2.8	1.9	2.2	12.7
Married/Common-law - with children	83.8	5.5	3.4	2.1	5.2	16.2
Lone parent	42.5	8.6	4.2	8.5	36.2	57.5
Other	82.6	5.4	2.8	3.1	6.1	17.4
Change in family composition	64.7	14.1	8.5	6.2	6.6	35.4
Sample size	23,660	2,727	1,620	1,332	2,145	7,824

Source: Survey of Labour and Income Dynamics, 1993-1996.
Note: - number to small to report

Appendix Table 2 : Composition of the population in low-income in 1993

Characteristics	Incidence of low-income in 1993 %	Percentage share of Entire population (1993)	Percentage share of Low-income population (1993)
Overall	11.0	100.0	100.0
Men	10.2	49.3	45.6
Women	11.8	50.7	54.4
Age			
Less than 6 years old	16.6	8.2	12.3
6 - 17 years	11.7	17.3	18.4
18 - 24 years	16.2	9.5	14.0
25 - 34 years	11.0	18.0	18.0
35 - 44 years	9.1	16.6	13.7
45 - 54 years	8.7	11.9	9.5
55 - 64 years	10.0	8.6	7.8
65 +	7.0	10.0	6.3
Family Composition			
Unattached individual	29.2	11.9	31.6
Married/Common-law - no children	2.6	18.4	4.3
Married/Common-law - with children	7.8	47.7	33.7
Lone parent	32.2	6.8	20.0
Other	6.7	12.8	7.8
Unknown	12.5	2.4	2.7

Source : Survey of Labour and Income Dynamics of 1993-1996.

CHART 1:
Exposure to low income at some point during 4 year period, 1993-1996
by individual characteristics

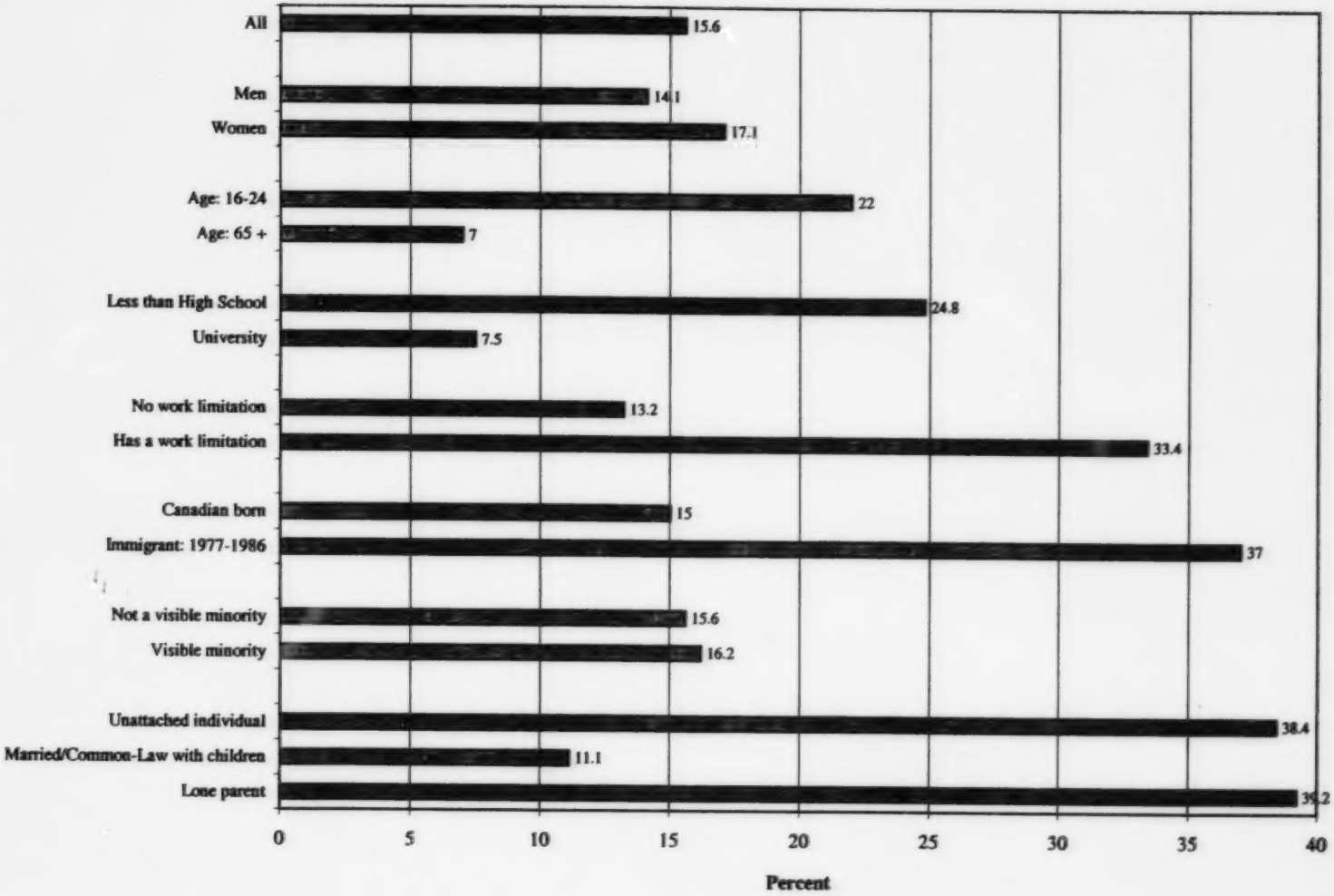


CHART 2:
Exposure to low income for four consecutive years, 1993-1996
by individual characteristics

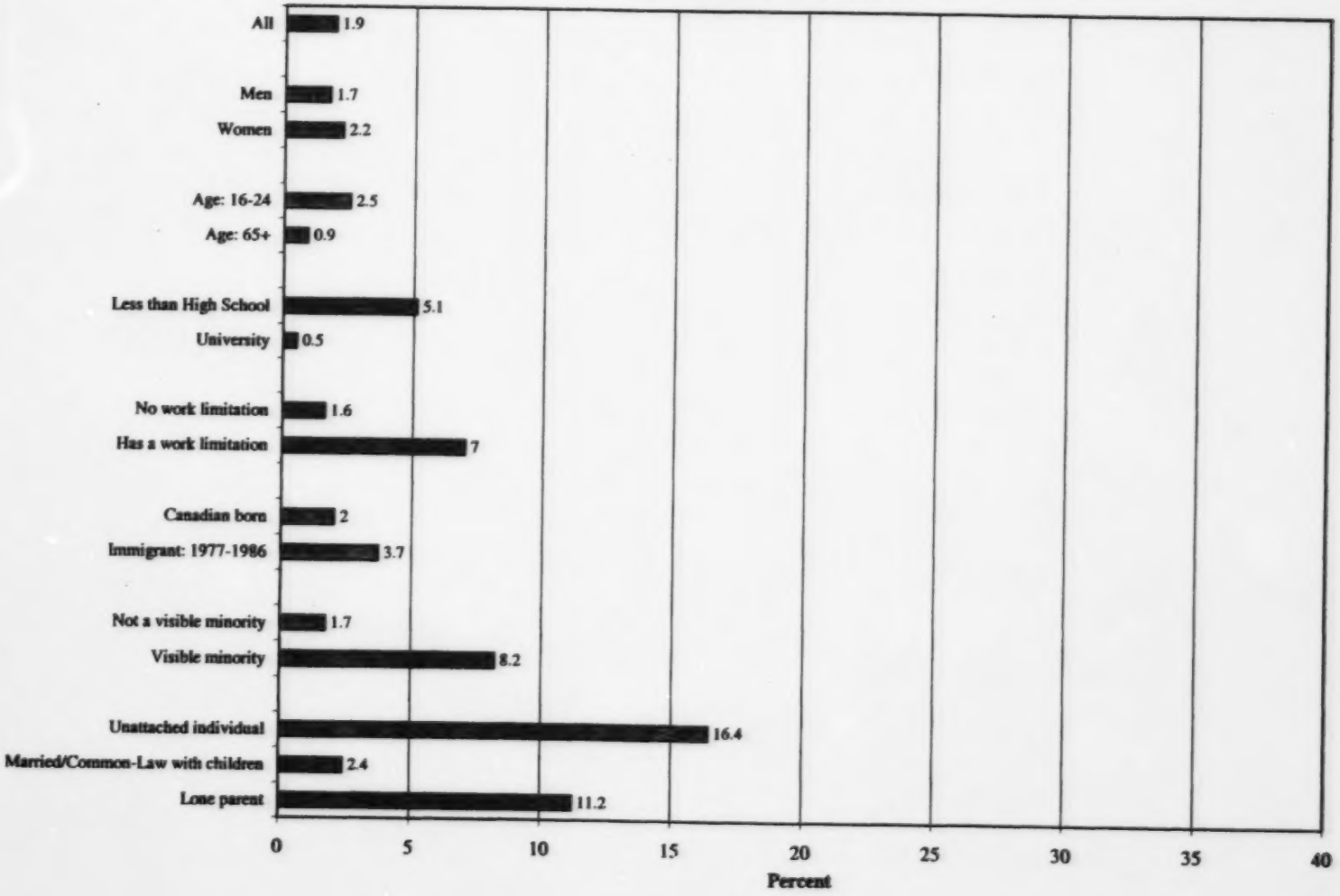


CHART 3:
Exposure to low income at some point during 4 year period, 1993-1996
by characteristics of major income earner

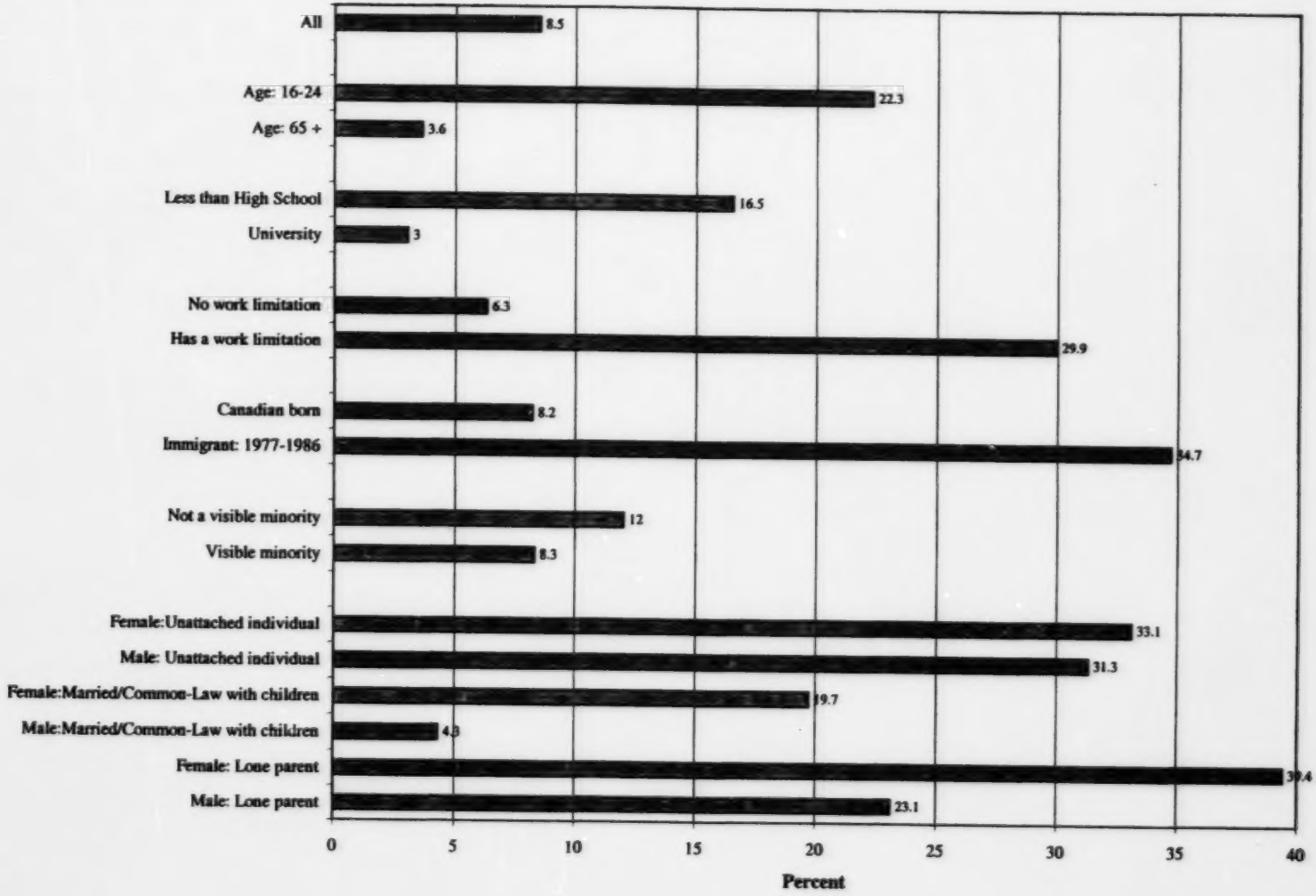
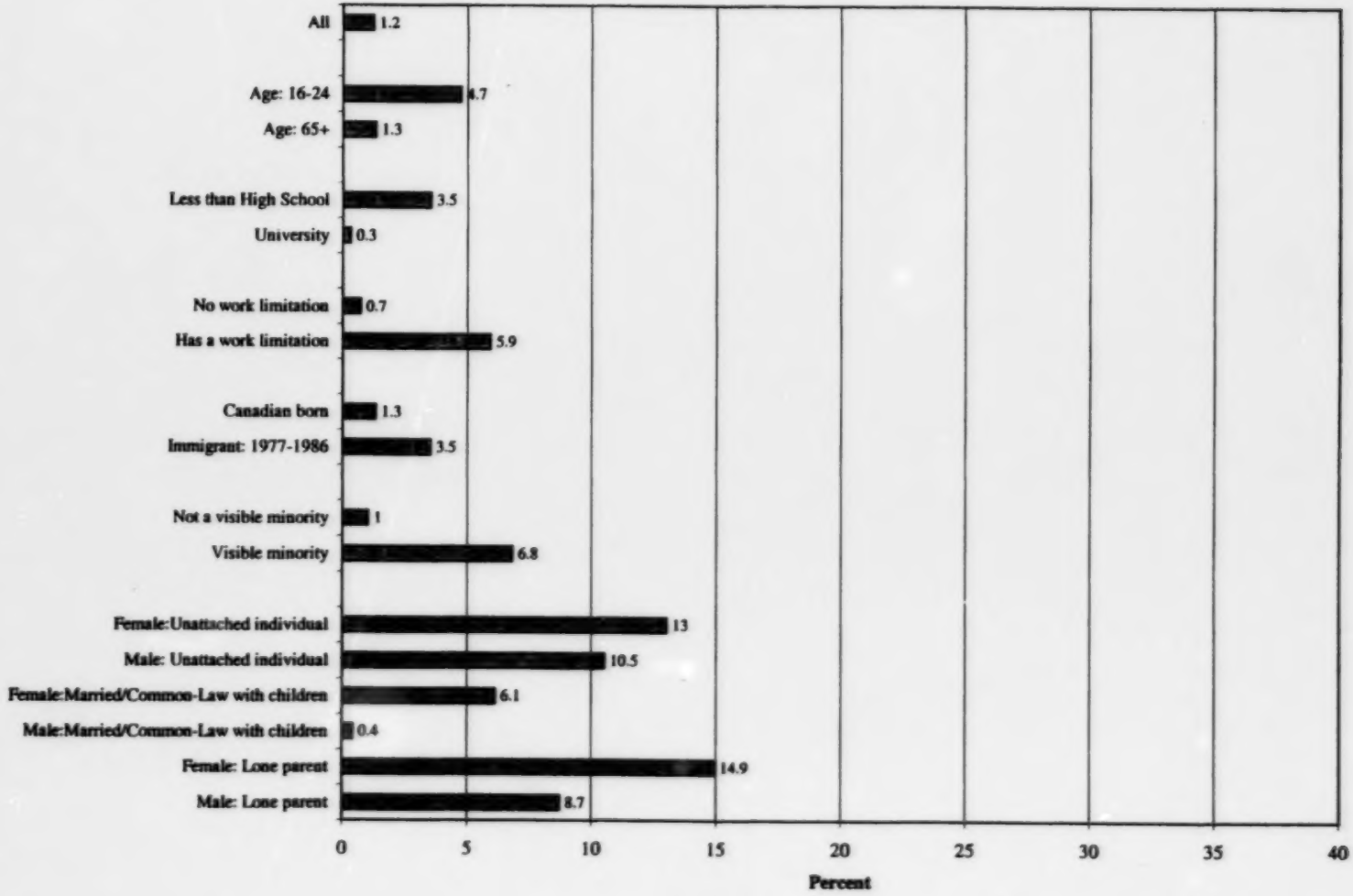


CHART 4:
Exposure to low income for four consecutive years, 1993-1996
by characteristics of the major income earner



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